REMARKS

35 U.S.C. 103(a) Rejection of Claims

Claims 1-22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Olafsson (U.S. Pat. 6,163,570) in view of Geile et al (U.S. Pat. 6,467,092).

Applicants respectfully assert that the claims as presently pending are allowable over the prior art of record. Reconsideration is respectfully requested.

In the present office action, the Examiner uses Olafsson in the rejections of all of the claims under 35 U.S.C. 103(a). The arguments from Applicants' Appeal Brief dated March 28, 2002 are all still applicable to the current rejection. The arguments related to Olafsson from Applicants' Response dated 12/31/02 are all still applicable to the current rejection. The arguments related to Olafsson from Applicants' Response dated 6/5/03 are all still applicable to the current rejection. The arguments related to Olafsson from Applicants' Response dated 11/21/03 are all still applicable to the current rejection.

The Examiner admits that Olafsson does not teach either of the two steps in independent claims 1 and 10 (see Office Action dated 2/11/04, paragraph 2, page 2). Note that the wherein clause of claims 1 and 10 also require these specific "detecting" and "adjusting" steps ("wherein said detecting and said adjusting are performed..."). Since Olafsson does not teach "said detecting" or "said adjusting" steps, there is no way for Olafsson to teach "said detecting and said adjusting are performed..." either. Thus, Olafsson teaches nothing outside the preamble portion of claims 1 and 10. Olafsson also does not teach "using a measured transmit power level of at least one of the analog modem and the digital modem as a parameter in designing a constellation" as required by independent claim 12.

Although Applicants believe this to be minor point, Applicants respectfully disagree with the Examiner's assertion that Olafsson discloses "a method for controlling the transmit power of the analog modem" (see Office Action dated 2/11/04, paragraph 2, page 2). Rather, Olafsson "...verifies the first **computed total transmit power** by calculating..." (Olafsson, col. 11, lines 4-5, emphasis added). Olafsson teaches a method for verifying a calculation using another calculation, not a method for controlling.

Referring now to Geile, Applicants respectfully assert that Geile does not disclose "a method of improving modem performance by controlling transmitted power of the modem comprising steps of: detecting power level of the analog modem; and adjusting the transmit

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power level of the analog modem in accordance with the difference between the detected transmit power level and a desired transmit power level" as asserted by the Examiner (see Office Action dated 2/11/04, paragraph 2, page 2). Geile describes a multipoint-to-point communications system with multiple transmitters (the "service units" in Geile) and one receiver (the "head end" in Geile). Power control is performed in this case to reduce the effect of the "near-far" problem, where some transmitters are farther from the receiver than others, and get drowned out. The power level measured at the head end of Geile is the RECEIVED POWER. The head end cannot detect the TRANSMIT POWER, since it is not located at the transmitter, and there is an unknown attenuation between the transmitter and receiver. The "nominal power level" in Geile is also received power level; otherwise the comparison made between power levels as described in Geile makes no sense. The method taught in Geile cannot do what is expressly require by our claimed invention, since the head end (i.e. receiver) described in Geile cannot detect the transmit power level, and cannot adjust the transmit power level based on a measurement it does not have.

The Examiner cites Geile, col. 42, lines 41-63, and asserts that "Geile et al also disclose wherein the detecting and the adjusting are performed during design of a constellation". Applicants respectfully point out that this section of Geile cited by the Examiner describes a run-of-the-mill bits-to-symbol mapping function which maps a set of n bits to a particular point in a constellation comprising 2^n points. It describes multiple constellations apparently as unrelated examples, and has nothing whatsoever to do with constellation design or its relation to transmit power.

The dependent claims from claims 1, 10, and 12 are allowable for at least the reasons given above, as well as Applicants' arguments regarding Olafsson in previous responses. The arguments above and the arguments regarding Olafsson in Applicants' previous responses are likewise applicable to the remaining claims.

Thus, neither Olafsson nor Geile teach any of the steps of the independent claims.

Applicants believe the application is in condition for allowance which action is respectfully solicited. Please contact me if there are any issues regarding this communication or the current Application.

Respectfully submitted,

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